

GEHR Plastics PVC-U Polyvinylchloride

Category : Polymer , Thermoplastic , Vinyl (PVC) , PVC, Uncompounded

Material Notes:

Polyvinyl chloride is a flame retardant material with an exceptional chemical resistance and also with lower stress cracking. PVC-U shows high mechanical strength, tensile strength and the continuous operating temperature is from -15°C to 60°C. It can also be easily solvent, cemented and welded. Properties include: High mechanical strength, tensile strength and hardness Good insulation properties for electronics High chemical resistance Self-extinguishing Low water absorption Easy to varnish and glue Low impact strength Limited weather resistance Applications include: Pumps and valve body Gaskets Bearing cages Pipe lines Hand pump pipes Brush basic body Parts in the dental medicine Seat strips Pipes for the mounting of kerfs Lamp box

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PVC-U-Polyvinylchloride.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.36 g/cc	1.36 g/cc	ISO 1183
Water Absorption	0.20 %	0.20 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	82	82	DIN 53505
Ball Indentation Hardness	120 MPa	17400 psi	ISO 2039
Tensile Strength at Break	30.0 MPa	4350 psi	ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	ISO 527
Elongation at Break	>= 10 %	>= 10 %	ISO 527
Elongation at Yield	3.0 %	3.0 %	ISO 527
Modulus of Elasticity	3.00 GPa	435 ksi	ISO 527
Flexural Strength	90.0 MPa	13100 psi	3.5%; ISO 178
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	0.300 J/cm²	1.43 ft-lb/in²	ISO 179
Coefficient of Friction	0.60	0.60	DIN 53375

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 µm/m-°C	44.4 µin/in-°F	DIN 53752
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	0.140 W/m-K	0.972 BTU-in/hr-ft²-°F	DIN 52612

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	60.0 °C	140 °F	
Deflection Temperature at 0.46 MPa (66 psi)	72.0 °C	162 °F	ISO 75
Vicat Softening Point	75.0 °C	167 °F	VST/B/50; ISO 306
Minimum Service Temperature, Air	-15.0 °C	5.00 °F	
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	VDE 0303
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	VDE 0303
Dielectric Constant	3.0	3.0	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	20.0 - 40.0 kV/mm	508 - 1020 kV/in	VDE 0303
Dielectric Loss Index	0.010	0.010	DIN 53483
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	KB; IEC 60112

Descriptive Properties	Value	Comments
Acid Resistance	yes	
Aromatic Resistance	limited	
Bondability	yes	
Chemical Resistance	DIN 8061	
CKW Resistance	no	
Color	Grey	
Hydrocarbonate Resistance	yes	
Hydroxide Resistance	yes	
Ketone Resistance	no	
Physiological indifference according	yes	
Resistance Against Hot Water	no	

Descriptive Properties	Value	Comments
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